

REMARKS

Claims 12-23 and 26-34 are pending in the Application, all of which stand rejected by the Office Action mailed May 04, 2009. Claims 12, 16, 26, and 27 are amended by this response. Claims 12 and 16 are independent claims, while claims 13-15 and 26-31, and 17-23 and 32-34, depend either directly or indirectly from independent claims 12 and 16, respectively.

Applicants' representative Kevin Borg appreciated the opportunity to speak with Examiner Faris Almatrahi by telephone on April 21, 2009. Mr. Borg pointed out in general aspects of Applicants' claims not disclosed by the cited art. No agreement was reached with respect to any claim.

Objections to the Drawings

The drawings stand objected to under 37 CFR 1.83(a), because "[t]he drawings must show every feature of the invention specified in the claims." (See Office Action at p. 2.) Specifically, the Office Action lists "saving the generated updating information in a storage, populating the updating information in an update store that acts as a repository of update packages whose lifecycle may be managed, enabling and disabling distribution of the updating information according to a state in the lifecycle, and packaging the saved updating information before communicating it to the distribution environment" as not shown in the drawings. (See *id.*) As an initial matter, Applicants respectfully submit that the original drawings are sufficient to satisfy 37 CFR 1.83(a). For example, Fig. 2 illustrates, *inter alia*, an Update Store (211) and a Life-cycle Management System for Update Packages (207) as part of a Carrier Network. (See Fig. 2.) Further, Fig. 3 also illustrates an Update Store and a Database. (See Fig. 3.) Applicants respectfully submit that these aspects of Figs. 2 and 3 would satisfy 37 CFR 1.83(a) regarding, for example, "an update store that acts as a repository of update packages whose lifecycle may be managed." As another example, regarding "enabling and disabling distribution of the updating information according to a state in the

lifecycle,” Applicants note that Fig. 20 illustrates an exemplary method of changing an update package state.

In any event, Fig. 38 is added by this response, along with related amendments to the specification. Applicants respectfully submit no new matter is added, as Fig. 38 is based on disclosure previously provided at, for example, [0061] of the Specification. Additional support for Fig. 38 and, for instance, the asserted “enabling and disabling distribution of the updating information according to a state in the lifecycle” can be found at, for example, [0053] (“...Lifecycle management of update packages may also comprise changing status information such as, for example, information specifying who gets an update package, or when to start dispensing an update package...”). Thus, for example, this aspect of the presently claimed subject matter could be found in the drawings at, for example, Fig. 38, block 3860 “Manage Lifecycle of Update Packages.”

Applicants respectfully submit that at least the above-identified aspects of previous figures, as well as the various blocks illustrated in Fig. 38, satisfy the requirements of 37 CFR 1.83(a).

The Office Action also objects to Figs. 3-37 as being “obscured and features are difficult to make out.” (See Office Action at p. 2.) Applicants respectfully traverse these assertions. Applicants also note that the present application has already gone through a number of Office Actions, with none of the previous Office Actions asserting that any figures were “obscured” or “difficult to make out.” Nonetheless, Applicants submit herewith replacement drawing sheets for Figs. 1-37 that enlarge certain aspects of these figures to make them even easier to make out. Applicants respectfully submit that no new matter is added by these replacement drawing sheets.

Applicants respectfully submit that the objections to the drawings are overcome as explained above, and request withdrawal of the objections to the drawings.

Rejection of Claims Under 35 U.S.C. §103

Claims 12-23 and 26-34 stand rejected under 35 U.S.C. §103 as being unpatentable over Thurston *et al.*, U.S. Publication No. 2003/0217193 (hereinafter "Thurston") in view of Hind *et al.*, U.S. Patent No. 7,069,452 (hereinafter "Hind"). Applicants respectfully traverse the rejection of those claims as discussed below.

Claim 12 And Its Dependent Claims Are Allowable Over The Cited Art

Applicants respectfully traverse the obviousness rejection of claim 12 and its dependent claims. For at least the reasons given in previous submissions, Applicants respectfully submit that Thurston and Hind, either alone or in combination, do not teach, suggest, or otherwise render obvious these claims.

Nevertheless, claim 12 is amended by the present response to clarify certain aspects of patentable distinctiveness over the asserted art. Namely, claim 12 is amended to recite a method for updating firmware in an electronic device of a system, the method comprising, *inter alia*, "populating the updating information in an update store that acts as a repository of update packages whose lifecycle may be managed; and managing the lifecycle of the updating information by **changing status information for the lifecycle of the updating information**, and enabling and disabling distribution of the updating information **according to the status information for the lifecycle of the updating information.**" Additional support for this amendment may be found in the specification at, for example, paragraph [0053] ("Lifecycle management of an update package may comprise actions such as, for example, creating, deleting, and editing of update packages. Lifecycle management of update packages may also comprise changing status information such as, for example, information specifying who gets an update package, or when to start dispensing an update package.")

Applicants respectfully submit that the cited art, either alone or in combination, does not teach, suggest, or otherwise render obvious at least **changing status information for the lifecycle of the updating information**, and enabling and disabling

distribution of the updating information **according to the status information** (which can be changed as part of managing the lifecycle) for the lifecycle of the updating information. For example, in maintaining its assertion that Thurston discloses "managing the lifecycle of the updating information by enabling and disabling distribution of the updating information according to a state in the lifecycle of the updating information, the Office Action states as follows:

Examiner respectfully disagrees. The limitation as recited is interpreted to imply that managing the lifecycle of the updating information according to a state in the lifecycle of the updating information. Thurston discloses in Figure 7 that distribution of update packages is enabled or disabled based on the status of the verification of system wide constraints which are based on the state of the updating information 702.

(Office Action at p. 8.) As an initial matter, Applicant respectfully traverses this assertion for reasons detailed in previous submissions. The Office Action provides no explanation or support for how or why "system wide constraints" could or would be based on the **state** of the updating information. In any event, such an asserted "status of the verification of system wide constraints..." cannot teach the presently claimed subject matter. First, the presently claimed subject matter recites "changing status information for the lifecycle of the updating information." Such "verification of system wide constraints" for any given purported update information would not change. Either they are verified or not. The purported "verification" would not be changed, and as such, cannot teach changing status information for the lifecycle of the updating information.

This is confirmed by an examination of the cited portions of Thurston relied upon as purportedly disclosing "managing the lifecycle of the updating information by enabling and disabling distribution of the updating information according to a state in the lifecycle of the updating information." The Office Action cites Figure 7 and paragraphs [0009], [0052], and [0053] as disclosing "managing the lifecycle of the updating information by enabling and disabling distribution of the updating information according

to a state in the lifecycle of the updating information.” (See Office Action at p. 4.)

Applicants first address [0009]. That paragraph reads as follows:

[0009] In certain further implementations, the metadata further comprises a header, wherein the header includes characteristics of a firmware update package that includes the firmware image. The metadata also comprises of dynamic constraints, wherein the firmware update application determines whether the dynamic constraints are satisfied before installing the firmware image on the hardware device. In still further implementations, the header further comprises a version number of the header, wherein the version number is read by the firmware update application to identify a version of the header. The header also comprises a name of a device dependent plug-in module, wherein the named device dependent plug-in module is invoked by the firmware update application to interpret the dynamic constraints to determine whether the dynamic constraints are satisfied.

Applicants respectfully submit such a teaching of “metadata” that comprises a “header” does not teach the presently claimed subject matter. For example, such a teaching is silent with respect to status information for the lifecycle of the updating information that can be changed, let alone managing the lifecycle of the updating information by **changing status information** for the lifecycle of the updating information, further still let alone managing the lifecycle of the updating information as fully set forth by claim 12, for example, including enabling and disabling distribution of the updating information according to the status information for the lifecycle of the updating information.

The Office Action also cites paragraphs [0052] and [0053] as disclosing “managing the lifecycle of the updating information by enabling and disabling distribution of the updating information according to a state in the lifecycle of the updating information.” (See Office Action at p. 4; *see also id.* at p. 6, asserting the same paragraphs disclose “wherein the lifecycle management system causes a change in the lifecycle state of updating information stored in a network that communicated the

updating information to the one or more electronic devices.”) Those paragraphs read as follows:

[0052] Control proceeds to block 704, where the device independent firmware update utility 302 requests the device dependent plug-in module 306 to confirm that system wide constraints are being satisfied before proceeding with the firmware installation. The system wide constraints may be distributed within the firmware update application 200 or the firmware package 108a, and may include constraints such as the version of the operating system, the amount of available storage, etc., that may need to be satisfied before installing the binary firmware image 404. The device dependent plug-in module 306 receives (at block 706) the request to verify the system wide constraints. The device dependent plug-in module 306 verifies (at block 708) the system wide constraints. If the system wide constraints are satisfied then the status is said to be “verified.” In contrast, if the system wide constraints are not satisfied then the status is said to be “not verified.” The device dependent plug-in module 306 sends (at block 710) the status on the verification of the system wide constraints to the device independent firmware update utility 302.

[0053] At block 712, the device independent firmware update utility 302 receives the status on the verification of the system wide constraints from the device dependent plugin module 306. If the system wide constraints are “not verified” (at block 712), then control proceeds to block 714 where the device independent firmware update utility 302 performs cleanup operations and exits. Cleanup operations may include closing files that are open, disposing of pointer data structures, closing network connections, etc. If at block 712, the device independent firmware update utility 302 receives a “verified” status for the system wide constraints, then control proceeds to block 716 where the device independent firmware update utility 302 passes the device dependent plug-in module 306 the list of properties package 402 containing the dynamic constraints, and requests the device dependent plug-in module 306 to discover matching hardware devices 310, 311 for firmware update.

Again, a mere discussion of **verification** of system-wide constraints of a firmware image being installed does not disclose managing the lifecycle of the updating

information. As discussed in previous submissions, this is even more so for the “system-wide constraints” identified by Thurston as “such as the version of the operating system, the amount of available storage, etc., that may need to be satisfied before installing the binary firmware image 404,” none of which are related to the lifecycle of updating information. In any event even if these portions of Thurston are somehow assumed, *arguendo*, as teaching “managing the lifecycle of the updating information by enabling and disabling distribution of the updating information according to a state in the lifecycle of the updating information” (which, as discussed previously, Applicants do not concede), Thurston’s teaching is still silent with respect to status information for the lifecycle of the updating information that can be changed, let alone managing the lifecycle of the updating information by changing status information for the lifecycle of the updating information, further still let alone managing the lifecycle of the updating information as fully set forth by claim 12. For example, the cited portion of Thurston gives no indication for how or why such constraints that are “distributed within the firmware update application 200 or the firmware package 108a” could or would be changed for the same purported updating information. Similarly, Applicants respectfully submit there is no indication in Thurston of how or why “the version of the operating system” or “the amount of available storage” would change at all, let alone change with respect to the lifecycle of update information, further still somehow teach, suggest, or otherwise render obvious “managing the lifecycle of the updating information by changing status information for the lifecycle of the updating information, and enabling and disabling distribution...” as claimed.

Applicants further respectfully submit the additional cited art does not remedy the above discussed shortcomings in the disclosure of Thurston. For the reasons discussed above, as well as in previous submissions, Applicants respectfully submit that the cited art, either alone or in combination, does not teach, suggest, or otherwise render obvious claim 12 or any claim dependent therefrom, and that those claims are allowable.

Applicants further submit that claims dependent from claim 12 are further allowable over the cited art for additional reasons. For example, in responding to

Applicants' previously pointing out that the prior Office Action failed to support or explain its assertion that Thurston disclosed claim 15's requirement of "retrieving the requested updating information from the update store," the Office Action states as follows:

Examiner respectfully disagrees. Figure 7 was cited to read on claim 15 as detailed above. Components not clear to applicant as reading on the features of claim 15 are mapped above in the rejection of claim 15. In particular, Thurston discloses extracting update information in Paragraph [0044] which reads on the retrieval of requested updating information.

(Office Action at p. 8.) Applicants respectfully submit such asserted "retrieval of requested updating information" does not teach retrieving the requested updating information from the update store as expressly required by claim 15. Paragraph [0044] of Thurston reads as follows:

[0044] The device independent firmware update utility 302 extracts the list of properties package 402 from the firmware update package 108a and forwards the firmware update package 108a to the device dependent plug-in module 306. In alternative implementations, the device independent firmware update utility 302 may extract the <name, value> pairs from the list of properties package 402 and forward the name value pairs to the device dependent plug-in module 306. The device dependent plug-in module 306 uses the <name, value> pairs to apply the dynamic constraints for the firmware update encapsulated into the <name, value> pairs.

Such a teaching is quite different from the retrieval of requested updating information of claim 15. For example, this portion of Thurston merely discusses the extraction of a list of properties package and name, value pairs – such an extraction is different from retrieval as claimed, particularly retrieval **from an update store**. Further, Claim 15 depends from claim 12, so the update store from which the claimed requested updating information is retrieved is an update store that "acts as a repository of update packages whose lifecycle may be managed." The extraction relied upon, at most, comes from an update package itself, and does not teach retrieval of anything, let alone retrieval of, for example, an update package in the first place from an update store.

Claim 16 And Its Dependent Claims Are Allowable Over The Cited Art

Applicants additionally respectfully traverse the rejections of claim 16 and its dependent claims. In rejecting claim 16, the Office Action cites to and relies on the same portions of Thurston as the Office Action cites to and relies on to reject claim 12. (See Office Action at p. 3-4.) Claim 16 is also amended generally similarly by the present response. Thus, for at least similar reasons to those previously discussed in connection with claim 12, as well as in previous submissions, Applicants respectfully submit that Thurston and Hind, either alone or in combination, do not teach, suggest or otherwise render obvious claim 16 or any of its dependent claims, and that those claims are allowable.

Applicants further respectfully submit that claims that depend from claim 16 are further allowable for additional reasons. For example, with respect to claims 28 and 29, the Office Action relies upon Figs. 1, 4, 8 and paragraphs [0026]-[0027], and [0042] of Thurston. Applicants have reviewed Figs. 1, 4, and 8, and are unable to locate a database in those figures, let alone "updating status information for the particular version of updating information in a database of lifecycle information for update information" as claimed by claim 28, or "updating status information in a database of lifecycle information for the one or more electronic devices" as claimed by claim 29. The next cited portion, [0026]-[0027], reads as follows:

[0026] The host 100 and the server 108 may be any computational device known in the art, such as a personal computer, a workstation, a server, a mainframe, a handheld computer, a palm top computer, a telephony device, etc. The networks 106, 110 may be any network known in the art, such as the Internet, an intranet, a local area network a wireless network, etc. The host 100 may alternatively be connected to the server 108 and the hardware device 104 without a network, such as through direct lines, common bus systems, etc., in a manner known in the art. Also each network 106, 110 may be part of one or more larger

networks or may be an independent network or may be comprised of multiple interconnected networks.

[0027] The hardware devices 102 and 104 may contain firmware 102a and 104a respectively. The server 108 may contain a firmware update package 108a, where the host 100 may download the firmware update package 108a over the network 110 and use data contained within the firmware update package 108a to update the firmware 102a, 104a on hardware devices 102, 104. If a hardware device 102, 104 has provisions for including firmware but has not installed firmware, then the host 100 may download the firmware update package 108a over the network 110 and install the firmware on the hardware devices 102, 104.

Applicants respectfully submit, as an initial matter, that these paragraphs of Thurston make no express mention of any "database." In any event, even if, *arguendo*, these portions somehow disclose the mere use of databases, such a teaching would still fall far short of teaching, suggesting, or otherwise rendering obvious, for example, a database of lifecycle information, let alone updating status information in a database of lifecycle information for update information, let alone the updating of status information as fully set forth in either claim 28 or 29. Moving on to the next cited portion of Thurston, [0042] reads as follows:

[0042] The list of properties package 402 contains properties, where each property is a dynamic constraint that may need to be satisfied before the firmware update application 200 installs the binary firmware image 404 on the hardware device 310, 311. The device dependent plug-in module 306 processes the dynamic constraints in addition to static constraints included in the device dependent plug-in module 306. For example, a dynamic constraint may indicate the version of the firmware upgrade in the firmware update package 108a. Since every new firmware update package 108a may have a different version, the version of the firmware upgrade can only be part of a dynamic constraint as the information cannot be known a priori to the device dependent plug-in module 306.

Such a "list of properties package" or "constraints" cannot be stretched so far to teach a database, let alone a database of lifecycle information, or updating status

information in a database of lifecycle information for update information. As such, Applicants respectfully submit that this portion of Thurston does not remedy the shortcomings in the other cited portions of Thurston, and that claims 28 and 29 are additionally allowable.

Conclusion

In general, the Office Action makes various statements regarding claims 12-23 and 26-34, and the cited references, that are now moot in light of the above. Thus, Applicants will not address such statements at the present time. However, Applicants expressly reserve the right to challenge such statements in the future should the need arise (e.g., if such statements should become relevant by appearing in a rejection of any current or future claim).

Applicants believe that all of claims 12-23 and 26-34 are in condition for allowance. Should the Examiner disagree or have any questions regarding this submission, Applicants invite the Examiner to contact the undersigned at (312) 775-8000 for an interview.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

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